DZS

E3212XP

In-building 10G switch with PoE++ for ORAN small cells

The E3212XP is a 10G L2+ managed PoE++ switch that combines the feature set of Enterprise applications with Mobile Transport and Carrier Ethernet. The E-Series is an ideal solution for ORAN in-building small cell deployments.

Features & Benefits

+ High switching capacity

+ Fully managed solution

+ Feature rich L2 and L3

+ Class C PTP sychronization support and SyncE for Small Cells

+ Ethernet Ring Protection Switching

+ Advanced OAM

+ Active PoE up to 90W per port

+ Green Ethernet

The E3212XP is a managed 10G PoE++ Ethernet switch that supports PTP timing distribution and SyncE. This unique combination of features is needed to support ORAN-based 4G and 5G RUs (radio units) and small cells. The E3212XP delivers ten 10G Ethernet electrical ports (RJ45 1/2.5/5/10G) with PoE++ support (802.3 af/at/bt) and a total budget of 900W on the subscriber side, and two optical 10/25G Ethernet ports (SFP+/SFP28) on the network side. The E3212XP delivers excellent switching capacity and performance, and comes with a comprehensive set of enterprise, industrial and carrier grade features. It can be deployed across a wide range of applications including ORAN small cells, video surveillance, wireless access, and many others. The E3212XP also delivers an outstanding user experience with easy-to-use configuration and management interfaces.

With its low cost of ownership, rich feature content, high performance and ease-of-use, the E3212XP is an ideal solution for the intersection of enterprise and next gen mobile applications.

Support for various applications and use cases

The E3212XP provides PoE++ (90 Watts of power per port) with advanced active PoE features such as PoE auto-checking, PoE scheduling, and PoE power delay to allow users to manage powered devices easily.

The new generation of ORAN small cells has tighter synchronization requirements, higher bandwidth and higher power requirements than traditional small cells. The E3212XP provides 10G to each small cell instead of the traditional 1G. It also supports SyncE and Class C T-BC/TC PTP timing requirements. Finally, it supports POE++ (802.3bt) to deliver up to 90 Watts of power to each ORAN small cell over electrical ethernet cables.
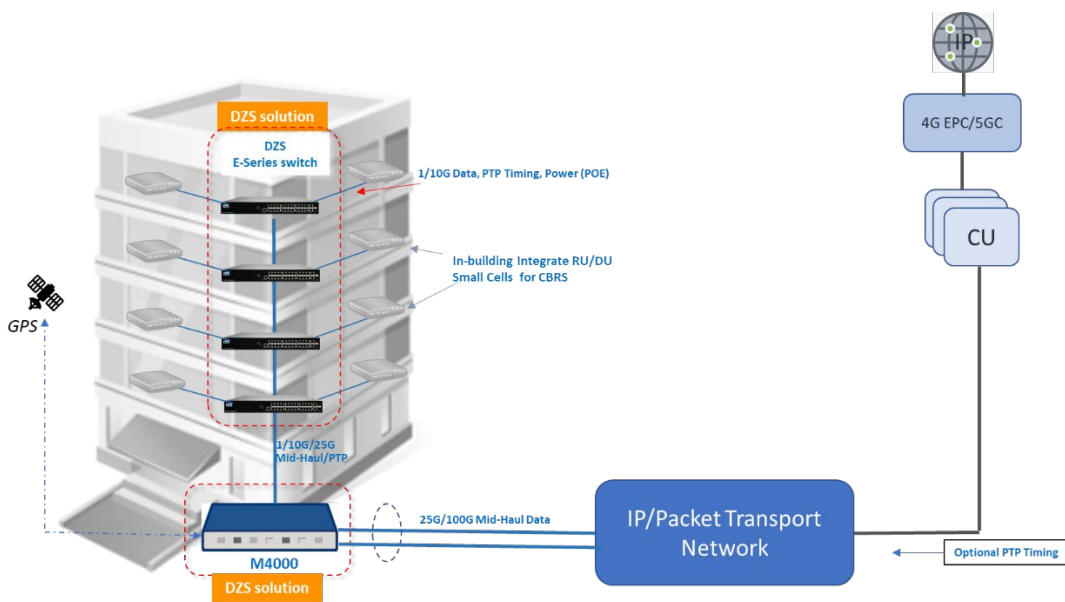
The E3212XP delivers extensive industrial and carrier grade functionality, including linear (LEPS) and ring (ERPS) protection with ITU-T G.8031, ITU-T G.8032 respectively, and quick restoration times.

Superior reliability through OAM and CFM for service assurance

The E-Series family of switches provides Operation, Administration and Maintenance (OAM) support according to the industry main standards IEEE 802.1ag/802.3ah and Y.1731. These standards provide the required mechanisms for network operators to monitor and guarantee that the proper service level requirements are met at all times. A comprehensive set of OAM tools can greatly simplify network management and monitoring, resulting in reduced operational expenditures.

Lowering total cost of ownership with energy-efficient design

The E-Series portfolio of switches is designed to help companies save power needs and reduce TCO. The E3212XP supports Energy Efficient Ethernet (IEEE 802.3az) standard that is widely used for indoor and campus applications to build a greener packet switched network.

Product Specifications

Capacity
+ 14.88 Mp/s
+ 128 Gb/s
+ MAC Table size 8K
+ Max Frame 9216 Bytes

Interfaces
+ Fixed 10-port 10G RJ45
+ Fixed 2-port 10G/25G SFP+/SFP28
+ 1-port of GE Out-of-Band MGMT

Management
+ SNMP 1, 2c, 3
+ HTTP/HTTPS/SSH
+ S-Flow
+ UPnP
+ Dual Firmware bank
+ NTP
+ Syslog
+ IPv6 Management
+ RMON
+ HW/SW Monitoring/Watchdog

QoS
+ 8 Hardware Queues
+ Scheduling
   >SP and WRR
Queue assignment based on DSCP/CoS
Classification
   > Port based
   > 802.1p VLAN priority based
   > IPv4/IPv6 precedence / DSCP based
   > DiffServ
   > Classification and re-marking ACLs
+ Rate Limiting
   > Ingress policer
   > Egress shaping and rate control
   > Per port

Layer 2 Capabilities
+ Standard Spanning Tree 802.1d
+ Rapid Spanning Tree (RSTP) 802.1w
+ Multiple Spanning Tree (MSTP) 802.1s
+ IEEE 802.3ad LACP
+ Up to 5 groups / 4 ports per group
+ Port-based VLAN
+ 802.1Q tag based VLAN
+ MAC-based VLAN
+ Management VLAN
+ Private VLAN Edge (PVE)
+ Q-in-Q (double tag) VLAN
+ Voice VLAN
+ GARP VLAN Registration Protocol (GVRP)
+ DHCP Relay
+ DHCP Option 82
+ IGMP v1/v2/v3 Snooping
+ Supports 1024 multicast groups
+ IGMP Querier
+ IGMP Proxy
+ IGMP snooping with proxy reporting
+ IGMP Report suppression
+ MLD v1/v2 Snooping
+ Multicast VLAN Registration (MVR)
+ LLDP
+ Port Mirroring

Carrier Ethernet and Timing
+ ITU-T G.8031 ELPS
+ ITU-T G.8032 ERPS
+ IEEE 802.3ah OAM
+ IEEE 802.1ag CFM
+ ITU-T Y.1731 PM
+ IEEE 1588v2 PTP
+ SyncE

Layer 3 Capabilities
+ IPv4 Static Routing
+ IPv6 Static Routing
+ DHCP Client/Server
+ DHCPv6 Client

PoE Support
+ IEEE 802.3af/at/bt
+ PoE Scheduling, Auto-Checking
+ Power Delay
+ 900W total power/90 Watts per port

Security
+ Secure Shell (SSH)
+ Secure Sockets Layer (SSL)
+ IEEE 802.1X RADIUS Authentication
+ IGMP-RADIUS based 802.1X
+ RADIUS Dynamic VLAN assignment
+ Layer 2 Isolation Private VLAN Edge (PVE)
+ Port Security - Fixed MAC
+ IP Source Guard
+ RADIUS/ TACACS+
+ Storm Control
+ DHCP Snooping
+ ACLs (256 entries, drop, rate limit)
+ ACL Classifiers:
   > S/D MAC addr, S/D IP addr
   > VLAN ID, Protocol, port, DSCP
   > IP precedence, S/D TCP/ UDP port
   > 802.1p, Ethernet type, ICMP, TCP flag
+ Loop Protection

Physical and Environmental
+ Dimensions (WxHxD):
   > 442 mm x 44 mm x 211 mm
+ Weight: < 4kg
+ Operating Temperature:
   > 32 to104°F (0 to 40°C)
+ Storage Temperature:
   > -4 to158°F (-20 to 70°C)
+ Operating humidity:
   > 10 to 90% non-condensing
+ Altitude: <10,000 ft (<3000 m)
+ AC power: 100 to 240VAC, 50/60 Hz
+ Maximum power consumption: 900 W
+ OOB management: 10/100/1000Base-T (RJ45)

Regulation and Compliance
+ CE Mark
+ UL 62368-1
+ FCC Part 15B
+ VCCI
+ UKCA

Ordering Information

Base Unit	
E3212XP-AC-NA	10X10GE POE++ 2X10G/25G SFP+/SFP28 SINGLE AC PWR, NA POWER CORD
E3212XP-AC-EU	10X10GE POE++ 2X10G/25G SFP+/SFP28 SINGLE AC PWR, EU POWER CORD
E3212XP-AC-UK	10X10GE POE++ 2X10G/25G SFP+/SFP28 SINGLE AC PWR, UK POWER CORD
E3212XP-AC-00	10X10GE POE++ 2X10G/25G SFP+/SFP28 SINGLE AC PWR, NO POWER CORD